

CLAIMS

What is claimed is:

1. A mobile device comprising:
a mobile terminal with an associated housing;
5 a wireless headset; and
a fastener disposed on the housing for mechanically connecting the wireless headset to the housing.
2. The mobile device of claim 1 wherein the wireless headset includes a speaker
10 and a microphone.
3. The mobile device of claim 2 wherein the wireless headset is adapted to operate in a first operating mode when mechanically connected to the housing and further wherein the wireless headset is adapted to operate in a second operating
15 mode when mechanically disconnected from the housing.
4. The mobile device of claim 3 wherein the wireless headset interfaces with the mobile terminal via a wireless interface when said wireless headset is operating in the second operating mode.
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5. The mobile device of claim 3 wherein the wireless headset interfaces with the mobile terminal via an electrical interface when said wireless headset is operating in the first operating mode.
- 25 6. The mobile device of claim 5 further comprising a first electrical contact disposed on the housing and a second electrical contact disposed on the wireless

headset, wherein the first electrical contact electrically connects to the second electrical contact when said wireless headset is operating in the first operating mode.

7. The mobile device of claim 2 wherein the fastener comprises a recess
5 disposed on the housing for receiving the wireless headset.
8. The mobile device of claim 7 wherein the recess is configured to secure the wireless headset to the housing.
- 10 9. The mobile device of claim 7 wherein the recess is configured to frictionally secure the wireless headset to the housing.
10. The mobile device of claim 7 wherein the wireless headset mechanically connects to the housing when the wireless headset is secured within said recess.
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11. The mobile device of claim 7 wherein the wireless headset is flush with the housing when the wireless headset is secured within said recess.
12. The mobile device of claim 7 wherein the fastener further comprises a cutout
20 in a side of the housing adjacent said recess.
13. The mobile device of claim 12 wherein the speaker is disposed within the cutout when the wireless headset is secured within said recess.
- 25 14. The mobile device of claim 12 wherein the microphone is disposed within the cutout when the wireless headset is secured within said recess.

15. The mobile device of claim 7 wherein the recess is disposed on a back of the housing.

16. The mobile device of claim 15 wherein said recess is further disposed on at
5 least one of a top, a front, and a side of the housing.

17. The mobile device of claim 2 wherein the speaker is disposed proximate a top of the housing when the wireless headset is mechanically connected to the housing.

10 18. The mobile device of claim 2 wherein the microphone is disposed proximate a bottom portion of the housing when the wireless headset is mechanically connected to the housing.

19. The mobile device of claim 2 wherein the microphone is disposed proximate a
15 side of the housing when the wireless headset is mechanically connected to the housing.

20. The mobile device of claim 1 wherein the housing further includes a wireless headset locator control.

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21. The mobile device of claim 20 wherein the wireless headset projects a locator signal when a user activates the wireless headset locator control.

22. The mobile device of claim 1 wherein the mobile terminal comprises a cellular
25 telephone.

23. The mobile device of claim 3 wherein in the first mode the wireless headset is fastened to the housing such that the housing and the wireless headset form a single unit.

5 24. The mobile device of claim 23 wherein both the housing and the wireless headset each include at least one electrical contact such that when the wireless headset is fastened to the housing, electrical signals are transferred between the mobile terminal and the wireless headset.

10 25. The mobile device of claim 24 wherein when the wireless headset is fastened to the housing and operating in the first mode, the speaker and microphone of the wireless headset function as the speaker and microphone for the mobile terminal.

15 26. The mobile device of claim 25 wherein the mobile terminal does not include a speaker and microphone in the housing and therefore is incapable of communicating audible signals with a user except in conjunction with the wireless headset.

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27. A mobile terminal comprising a detector circuit to determine a position of a wireless headset relative to the mobile terminal, wherein the mobile terminal automatically establishes a wireless or electrical interface between the mobile terminal and the wireless headset dependent on the determined position.

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28. The mobile terminal of claim 27 wherein the wireless interface comprises a short-range wireless network.

29. The mobile terminal of claim 28 wherein the short-range wireless network
10 comprises a short-range ad hoc wireless network.

30. The mobile terminal of claim 27 wherein the mobile terminal establishes the wireless interface between the mobile terminal and the wireless headset when the detector circuit determines that the wireless headset is mechanically disconnected
15 from the mobile terminal.

31. The mobile terminal of claim 27 wherein the mobile terminal establishes the electrical interface between the mobile terminal and the wireless headset when the detector circuit determines that the wireless headset is mechanically connected to
20 the mobile terminal.

32. The mobile terminal of claim 31 wherein the detector circuit determines that the wireless headset is mechanically connected to the mobile terminal when the detector circuit detects electrical current flow between the mobile terminal and the
25 wireless headset.

33. The mobile terminal of claim 32 wherein the detector circuit detects electrical current flow between the mobile terminal and the wireless headset by detecting electrical current flow between mobile terminal circuitry and headset circuitry.
- 5 34. The mobile terminal of claim 27 wherein the mobile terminal comprises a cellular telephone.

35. A method of selecting a communication interface between a mobile terminal and a wireless headset, the method comprising:

determining if the wireless headset is mechanically connected to the mobile terminal;

5 automatically selecting an electrical-interface operating mode when the wireless headset is mechanically connected to the mobile terminal; and

automatically selecting a wireless-interface operating mode when the wireless headset is mechanically disconnected from the mobile terminal.

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36. The method of claim 35 wherein determining if the wireless headset is mechanically connected to the mobile terminal comprises determining if the wireless headset is electrically connected to the mobile terminal.

15 37. The method of claim 36 wherein determining if the wireless headset is electrically connected to the mobile terminal comprises determining if electrical current is flowing between the wireless headset and the mobile terminal.

38. The method of claim 35 wherein automatically selecting a wireless-interface operating mode comprises establishing a short-range wireless network between the mobile terminal and the wireless headset.

39. The method of claim 38 wherein establishing the short-range wireless network between the mobile terminal and the wireless headset comprises
25 establishing a short-range *ad hoc* wireless network between the mobile terminal and the wireless headset.

40. A mobile device comprising:
a headset;
a mobile terminal
a detector circuit for determining a position of the headset relative to the
5 mobile terminal; and
wherein the mobile device automatically selects one of two operating modes
responsive to the determined position of the headset.
41. The mobile device of claim 40 wherein the detector circuit determines the
10 position of the headset by determining if the headset is mechanically connected to or
disconnected from the mobile terminal.
42. The mobile device of claim 41 wherein the detector circuit determines that the
headset is mechanically connected to the mobile terminal when the detector circuit
15 detects an electrical current flow between the mobile terminal and the headset.
43. The mobile device of claim 41 wherein the mobile device automatically
selects an electrical operating mode when the headset is mechanically connected to
the mobile terminal and wherein the mobile device automatically selects a wireless-
20 interface operating mode when the headset is mechanically disconnected from the
mobile terminal.
44. The mobile device of claim 41 wherein the headset is mechanically connected
to the mobile terminal when the headset is secured within a recess disposed in at
25 least one side of a housing of the mobile terminal.

45. The mobile device of claim 44 further comprising:
a first electrical contact disposed on a surface of the recess;
a second electrical contact disposed on a surface of the headset; and
wherein the first electrical contact electrically connects to the second
5 electrical contact when the headset is secured within the recess.
46. The mobile device of claim 44 wherein the recess frictionally secures the
headset to the housing.
- 10 47. The mobile device of claim 40 wherein the headset comprises a wireless
headset.
48. The mobile device of claim 40 wherein the mobile terminal comprises a
cellular telephone.

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49. A mobile terminal comprising:

a speaker for projecting audible signals to a user;

a microphone for receiving audible signals from the user;

wherein said speaker and microphone interface with the mobile terminal via

5 an electrical interface when said speaker and microphone are

mechanically connected to the mobile terminal; and

wherein said speaker and microphone interface with the mobile terminal via a

wireless interface when said speaker and microphone are

mechanically disconnected from the mobile terminal.

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50. The mobile terminal of claim 49 wherein the wireless interface comprises a short-range wireless network.

51. The mobile terminal of claim 50 wherein the short-range wireless network

15 comprises a short-range ad hoc wireless network.

52. The mobile terminal of claim 49 wherein the speaker and microphone are disposed in a wireless headset.

20 53. The mobile terminal of claim 52 wherein the speaker and microphone are mechanically disconnected from the mobile terminal when the wireless headset is mechanically disconnected from the mobile terminal.

54. The mobile terminal of claim 52 wherein the speaker and microphone are
25 mechanically connected to the mobile terminal when the wireless headset is mechanically connected to the mobile terminal.

55. The mobile terminal of claim 54 wherein the wireless headset mechanically connects to the mobile terminal when the wireless headset is secured within a recess on a housing of the mobile terminal.

5 56. The mobile terminal of claim 55 wherein the recess frictionally secures the wireless headset to the housing.

57. The mobile terminal of claim 52 wherein the wireless headset further includes audio processing circuitry to process the audible signals.

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56. The mobile terminal of claim 57 wherein the audio processing circuitry interfaces with the mobile terminal via the electrical interface when the speaker and microphone are mechanically connected to the mobile terminal.

15 59. The mobile terminal of claim 57 wherein the audio processing circuitry interfaces with the mobile terminal via the wireless interface when the speaker and microphone are mechanically disconnected from the mobile terminal.

60. The mobile terminal of claim 52 further comprising a detector circuit to
20 determine a position of the wireless headset relative to the mobile terminal to determine if the speaker and microphone are mechanically connected to the mobile terminal.

61. The mobile terminal of claim 60 wherein the detector circuit determines if the
25 speaker and microphone are mechanically connected to the mobile terminal by determining if the speaker and microphone are electrically connected to the mobile terminal.

62. The mobile terminal of claim 61 wherein the detector circuit determines if the speaker and microphone are electrically connected to the mobile terminal by detecting an electrical current flow between the mobile terminal and the wireless
5 headset.

63. The mobile terminal of claim 52 further comprising a headset locator wherein the speaker projects a locator signal when the headset locator is activated.

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